

ABSTRACT OF THE DISCLOSURE

The present invention relates to a method and system of relaying calls with a tone provision function in the next generation mobile communication network. The call relaying procedures and functions support a Voice over Internet Protocol (VoIP) function between an originating gateway controller and a terminating gateway controller, by modifying the Bearer Independent Call Control (BICC) protocol, while receiving the tone from an external tone generating device using the BICC protocol, Media Gateway Control Protocol (MGCP), and 3rd Generation-Inter-Operability Service (3G-IOS) protocol in the next generation mobile communication network based on an Internet Protocol (IP). The BICC, MGCP and 3G-IOS protocols improve the IP-based network by supporting the VoIP function between the originating gateway controller and the terminating gateway controller, while receiving the tone from an external tone generating device. This is accomplished by redefining the BICC signal processing procedures so that APM messages may be transmitted and received multiple times between the originating gateway controller and the terminating gateway controller.